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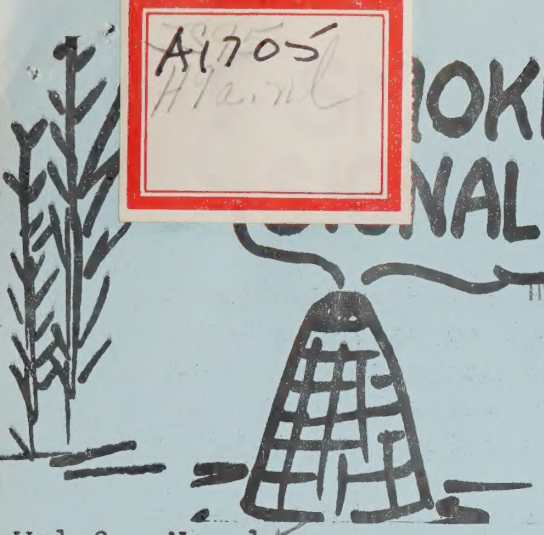

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Quarterly News Bulletin of the Humboldt County Air Pollution Control District

Vol 2, No. 1 First Quarter - 1970
5630 South Broadway, Eureka, California 95501 (707 443-3091)

STRICTER CONTROLS FOR CALIFORNIA

Through programs announced by Governor Ronald Reagan and bills introduced in the Legislature, air pollution control in California will become even more stringent.

The Governor recently addressed the Legislature calling for an Omnibus Clean Air Law which would greatly intensify the state's anti-pollution efforts. This program covers almost all areas of air pollution control, including additional controls over the internal combustion engine; new regulations governing gasoline composition; open burning; agricultural burning and industrial emissions; a coordinated air basin attack on emissions; air monitoring and siting of power plants.

All areas of the state would be required to activate a county air pollution control district or join a regional district in an effort to achieve basin-wide control of air pollution. Other measures requested would prohibit open burning at refuse dumps, auto wrecking yards and salvage operations; limit emissions of smoke and dust on a statewide basis; and delegate to the Air Resources Board and local control districts the authority to regulate agricultural burning.

The establishment of air basins and air quality standards by the Air Resources Board and coordinated air pollution control programs in the air basins require a more effective statewide air monitoring program.

Because of the growing demand for electricity and the increasing concern over air pollution, it is essential that the two needs be considered together in planning and constructing future power plants and the Governor has called for authority to direct the planning of power plant locations for the next 20 years, which would provide a master plan for locating power plants, taking into account all environmental factors, the need for electricity and types of fuel (nuclear and fossil).

Among some 50 bills introduced into the Legislature relating to air pollution control, many of which are supported by or requested by the Governor, the following subjects are covered by proposed air pollution control legislation:

$6,000 civil penalty (daily) for violation of air pollution control regulations;
Publication of all data of air pollution control agencies;
Limiting the size of internal combustion engines;
Banning engines which discharge any pollutants;

(Continued on Page 4)

HEARING BOARD REVIEWS TEPEES

The second meeting of the Hearing Board of the Humboldt County Air Pollution Control District was held on February 19, 1970, to review a continuation of appeals from Rule 53 (open burning) and variance requests were heard from five tepee burner operations in violation of the smoke opacity limitations of Section 24242 of the State of California Health and Safety Code and Rule 50 of the Humboldt County Air Pollution Control District.

Six of the eight applicants were granted variances until September 8, 1970. The expiration date of these variances will coincide with that of several prior variances which were granted at the last Hearing Board meeting in November 1969. Hearing Board Chairman, John Morrison, stated that all tepee burner operators should be upgrading their operations to be in compliance with the Rules and Regulations of the HCAPCD as soon as possible because the Board is going to be very critical of any new variance requests beyond September 8, 1970.

Summary of Hearing Board Action

Organization	Location	Violation	Variance Granted Until
Simpson Timber Co.	Korbel	Open burning	Sept. 8, 1970
Simpson Timber Co.	Orick	Open burning	Sept. 8, 1970
McMurray Roofing	Eureka	Open burning	Not granted
Halvorsen Industries	Eureka	Smoke opacity	*June 17, 1970
Crown Redwood Co.	Fortuna	Smoke opacity	Sept. 8, 1970
Cal-Pacific Mfg. Co.	Blue Lake	Smoke opacity	Sept. 8, 1970
Englewood Lumber Co.	Redcrest	Smoke opacity	Sept. 8, 1970
Precision Lumber Co.	Bayside	Smoke opacity	Sept. 8, 1970

*Variance may be extended to September 8, 1970 if applicant submits adequate progress report.

TEPEE TOPICS

As of April 1, 1970, a total of 66 tepee burner operating permit applications have been received by the HCAPCD. Inspection of the individual burners has resulted in the issuance of 17 operating permits and 31 permits have been denied for inadequate burner construction or operation in violation of Section 24242 of the California Health and Safety Code and Rule 50 of the HCAPCD. Eighteen permit applications are still being evaluated. Of the 31 permit denials, 11 burner operators have curtailed burning to only one day per week, 10 operators have filed plans for burner improvements, 8 burners are being shut down and 2 burner operators have not yet responded to the permit denials.

The main tepee burner problem is insufficient burning temperature to maintain complete combustion of wood volatiles. This problem can frequently be solved by installing a recirculating blower on the overfire air system to reduce the cooling effect of outside air. On one burner, both underfire and overfire air is being recirculated during startup to give grearly improved burning efficiency.

(Continued on Page 4)

QUESTIONS AND ANSWERS

With the recent nationwide interest in environmental problems of all types, many questions are asked of the Humboldt County Air Pollution Control District regarding our activities. We will attempt to answer briefly some of the more frequent inquiries.

Question: How many air pollution control districts are there in northern California?
Answer: Humboldt County is the only coastal county with an active air pollution control program north of Marin County. Mendocino County is considering the formation of a similar district.

Question: How large is the staff of the HCAPCD?
Answer: Active members of the HCAPCD include a control officer, chemist, inspector, and stenographer.

Question: What are the main air pollutants in Humboldt County?
Answer: Particulate matter caused by excessive burning and pulp mill odor. All other types of air pollution are being regularly measured and are below the California state air quality standards.

Question: How can local citizens help control air pollution?
Answer: Notify the HCAPCD when you observe a suspected problem. Minimize individual trash burning operations - burn only paper and combustible material in incinerators - don't burn wet garbage - start a compost pile for leaves and lawn trimmings.

Question: What does HCAPCD do with complaints that are phoned in?
Answer: All complaints are investigated for possible violation of the Rules and Regulations of the HCAPCD. Odor complaints are correlated with regular reported pulp mill monitoring data.

Question: How are violators prosecuted?
Answer: Individual violators are contacted and given a written warning of violation. Flagrant offenders are given a formal Notice of Violation. If corrective action is not taken within ten days, the violator is turned over to the District Attorney for municipal court action. Persons with operating permits issued by the HCAPCD are subject to permit revocation.

Question: Are tepee burners going to be outlawed in Humboldt County?
Answer: No, but they must operate within the smoke opacity limitations of the California Health and Safety Code and the HCAPCD. Refer to "Tepee Topics" (Page 2) for a more complete discussion of this problem.

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Stricter Controls (Continued)

Elimination of lead from gasoline over a period of several years;
Banning future fossil fuel-burning power plants; and
Regular inspection of all cars for emissions.

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Tepee Topics (Continued)

As the demand for sawdust and hog fuel increases in many mills, only redwood bark remains to be disposed of in greatly oversized burners. Present studies of the HCAPCD are being concentrated on developing a satisfactory burner for redwood bark alone. The total air recirculation system seems to offer the best possibilities for quick, inexpensive burner improvement. Any burner operators wishing assistance in modifying their burners should contact Nor-Cal Sheet Metal Co., Medford Blowpipe Co., or the HCAPCD.

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COMPLAINT SCOREBOARD

Greater citizen awareness of air pollution problems has caused the smoke and fallout complaints to exceed pulp mill odor responses during the past few months. After a few upset conditions in January, both pulp mills are operating consistently below the emission standards specified in the Rules and Regulations of the HCAPCD with the greatest improvement being noticed in the Bucksport and South Broadway areas of Eureka.

	January	February	March
Smoke	32	102	85
Fallout	2	15	10
Pulp Mill Odor	45	110	80
Other Odor	3	0	2

Persons phoning in complaints of excessive smoke or fallout are requested to be more explicit concerning the expected source of the problem rather than making a general statement, such as "It is smoky in town today."

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NEWS BRIEFS

Georgia Pacific Corporation has ended all open burning operations on the Samoan Peninsula with the recent startup of its new hog fuel system. The new system, which was installed at a cost in excess of $120,000, will utilize redwood bark as fuel in the company's power boilers. This unique hogging and shredding operation is believed to be the only one of its type which can be used for redwood bark.

Summary of Air Quality Studies

Pollutant	Month	Maximum	Average	State Std.
Dust Fall (tons per square mile per month)	Dec. 1969	17.6 @ Samoa	8.1	None
	Jan. 1970	29.8 @ Blue Lake	14.3	"
	Feb. 1970	12.3 @ Samoa	8.4	"
Suspended Particulate Matter (micrograms per cubic meter)	Dec.	175 @ Samoa	74	Tentative std. (60 micrograms per cubic meter)
	Jan.	136 @ Arcata	44	
	Feb.	180 @ Eur-SDH	80	
Total Sulfation (mg of SO_3 per sq. decimeter per day)	Dec.	0.09 @ Samoa	0.04	None
	Jan.-Feb.	0.08 @ Samoa	0.04	"
Total Oxidant (ppm)	Jan.	0.009 @ Blue Lake	0.005	0.100
	Feb.	0.013 @ Blue Lake	0.005	"
	March	0.013 @ Arcata	0.004	"
Nitrogen Dioxide (ppm)	Jan.	0.005 @ Eureka	0.003	0.250
	Feb.	0.012 @ Eureka	0.004	"
	March	0.009 @ Eureka	0.005	"
Aldehydes (ppm)	Jan.	0.046 @ Arcata	0.018	None
	Feb.	0.080 @ Arcata	0.033	"
	March	0.029 @ Arcata	0.019	"
Sulfur Oxides (ppm)	Jan.	0.001 @ Eur-SDH	<0.001	0.040
	Feb.	0.005 @ Eur-SDH	0.002	"
	March	0.001 @ Eur-SDH	<0.001	"
Hydrogen Sulfide (ppm)	Jan.	0.001 @ Eur-SDH	<0.001	0.030
	Feb.	0.005 @ Eur-SDH	0.002	"
	March	0.010 @ Eur-SDH	0.005	"
Total Mercaptans (ppm)	Jan.	0.001 @ Eur-SDH	<0.001	
	Feb.	0.010 @ Eur-SDH	0.005	
	March	0.003 @ Eur-SDH	0.001	

Testing for Sulfur oxides, hydrogen sulfide, and total mercaptans done only at California State Division of Highways offices, Wabash and Union Streets, Eureka, California.

HUMBOLDT COUNTY
AIR POLLUTION CONTROL DISTRICT
5630 SOUTH BROADWAY
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of the
Humboldt County
Air Pollution Control District

Vol. 2, No. 2 Second Quarter - 1970
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1969 EMISSION INVENTORY COMPLETED

The Humboldt County Air Pollution Control District has completed its first annual emission inventory of air pollutants released by stationary and transportation sources in Humboldt County. A continuing program of air pollution surveys and monitoring of atmospheric contaminants will result in periodic adjustments of the emission inventory to show trends in new air pollution problems or reductions brought about by control regulations. Completion of this inventory represents another milestone passed in the establishment of a workable air pollution control program in Humboldt County. Table I shows the distribution of the various classes of air pollutants produced by stationary and transportation sources. While Los Angeles attributes 90 percent of its air pollution problems to transportation; the San Francisco Bay area claims 65 percent transportation causes; in Humboldt County only 41 percent of the air pollution load results from moving sources.

TABLE I
SUMMARY OF AIR POLLUTANT EMISSIONS IN HUMBOLDT COUNTY, 1969

	STATIONARY SOURCES		TRANSPORTATION		TOTAL
Air Pollutant	Tons/Day	Percent	Tons/Day	Percent	Tons/Day
Particulate Matter	34.7	95.9	1.5	4.1	36.2
Carbon Monoxide	157.6	47.2	176.9	52.8	334.5
Hydrocarbons	29.7	31.9	63.3	68.1	93.0
Oxides of Nitrogen	8.7	42.2	11.9	57.8	20.6
Sulfur Oxides	6.1	85.9	1.0	14.1	7.1
Total-All Pollutants	368.0	59.0	254.6	41.0	622.0

AVERAGE EMISSIONS OF AIR POLLUTANTS
IN HUMBOLDT COUNTY, 1969
(Tons per Day)

EMISSION SOURCE	PARTICULATE MATTER	CARBON MONOXIDE	HYDRO-CARBONS	OXIDES OF NITROGEN	SULFUR OXIDES
STATIONARY SOURCES					
ORGANICS:					
Petroleum Marketing	-	-	1.7	-	-
Surface Coating	-	-	1.1	-	-
Dry Cleaning	-	-	0.4	-	-
Other	-	-	1.4	-	-
TOTAL	-	-	4.6	-	-
INCINERATION:					
Open Burning, Dumps	0.7	3.5	1.8	0.4	-
Open Burning, Agricultural	0.5	1.8	1.2	0.1	-
Open Burning, Other	0.5	1.7	1.1	0.1	-
Incinerators, Residential	0.8	10.0	0.8	0.1	-
Incinerators, Comm. & Ind.	0.2	0.8	0.1	0.1	0.1
TOTAL	2.7	17.8	5.0	0.7	0.1
MINERAL PROCESSING:					
Asphalt Batching	0.1	-	-	-	-
Sand & Gravel	0.2	-	-	-	-
TOTAL	0.3	-	-	-	-
COMBUSTION OF FUELS:					
Natural Gas, Domestic	0.1	-	-	0.5	-
Natural Gas, Comm. & Ind.	0.1	-	0.1	0.8	-
Natural Gas, Power Plant	0.1	-		1.9	-
Fuel Oil	0.3	0.1	0.1	1.4	4.6
LPG	Nil	-	-	0.1	-
Wood Fuel, Residential	0.1	0.4	0.1	Nil	-
Wood Fuel, Industrial	2.1	25.7	1.8	0.9	-
TOTAL	2.8	26.2	2.1	5.6	4.6
LUMBERING INDUSTRY:					
Open Burning	1.0	3.6	2.6	0.1	-
Tepee Burning	11.0	74.0	7.4	1.1	-
Sander Dust Cyclones	10.0	-	-	-	-
Veneer Driers	0.3	-	5.6	-	-
Other	1.0	-	-	-	-
TOTAL	23.3	77.6	15.6	1.2	-
PULP MILLS:					
Recovery Furnaces	1.2	36.0	2.4	1.2	0.4
Lime Kilns	0.5	Included in	combustion	of fuels	1.0
Smelt Dissolvers	0.5	-	-	-	-
Wood Handling	3.4	-	-	-	-
TOTAL	5.6	36.0	2.4	1.2	1.4
TOTAL, STATIONARY SOURCES	34.7	157.6	29.7	8.7	6.1
TRANSPORTATION					
MOTOR VEHICLES:					
Gasoline-Powered					
Exhaust	0.7	159.0	43.4	9.6	0.4
Blowby	-	0.4	4.8	-	-
Evaporation	-	-	10.8	-	-
Diesel-Powered	0.3	1.8	1.0	0.9	0.1
TOTAL	1.0	161.2	60.0	10.5	0.5
AIRCRAFT	0.2	15.4	2.9	0.8	-
RAILROADS & SHIPS	0.3	0.3	0.4	0.6	0.5
TOTAL, TRANSPORTATION	1.5	176.9	63.3	11.9	1.0
TOTAL, ALL SOURCES	36.2	334.5	93.0	20.6	7.1

TRS EMISSION INVENTORY, 1969

An emission inventory for Humboldt County would not be complete without including the quantities of odorous sulfur compounds released by the two pulp mills. The TRS emissions listed in Table II are for the year 1969 and are considerably higher than the present emission levels that have been achieved since the control regulations became effective in January, 1970. TRS (total reduced sulfur) is a collective term used to group hydrogen sulfide, methyl mercaptan, dimethyl sulfide, dimethyl disulfide and any other odorous sulfur compounds.

Table II

SOURCE	TRS (lb/day)
Knotters & Washers	740
Storage tank vents	270
Oxidizers	680
Recovery Furnaces	1400
Smelt Dissolvers	70
Lime Kilns	170
Total	3330

TEPEE TOPICS

All tepee burner operating permits have now been processed by the Humboldt County Air Pollution Control District. From a total of 66 permit applications processed, 23 operating permits were issued and 43 applications were denied for defective burner construction or smoke density in violation of Section 24242 of the California Health and Safety Code and Rule 50 of the Humboldt County Air Pollution Control District. The 43 permit denials have resulted in the following compliance actions:

15 - Converted to emergency standby service.
16 - Schedules of corrective action filed.
11 - Granted temporary variances by Hearing Board.
1 - Shut down.

In every case where the burner operators have been able to remove sawdust from the burners, a greatly improved burning efficiency has been obtained. The problems of redwood bark burning are now receiving major attention by the engineering staffs of all the larger lumber companies and by year end we should have several successful installations operating within the smoke opacity limitations.

COMPLAINT SCOREBOARD

Improved pulp mill operations and favorable winds, have combined to drive odor complaints to new all time low levels with a majority of the listed complaints being repeated calls from the same individuals. Main stack emissions from both pulp mills were consistently below the allowable limits for the past three months.

	April	May	June
Smoke	37	24	11
Fallout	0	0	4
Pulp Mill Odor	32	73	63
Other Odor	3	3	2

We wish to remind everyone that the 24 hour telephone answering service of the Humboldt County Air Pollution Control District is still in operation. The expense of maintaining this service during the past 10 months has averaged out to be 86 cents per call received. Is this service worth continuing?

CONTROL BOARD REVIEWS STANDARDS

On May 27, 1970 the Humboldt County Air Pollution Control Board held its annual review of standards as required by Rule 62 of the Rules and Regulations of the Humboldt County Air Pollution Control District.

Air Pollution Control Officer, C. P. Sassenrath recommended the adoption of stricter controls for particulate matter, sulfur dioxide and TRS emissions to achieve improved air pollution control in Humboldt County as follows:

RULE 52 - A maximum of 0.1 grain per cubic foot for new combustion operations installed after January 1, 1971.

RULE 56 - Reduction of the sulfur oxide emission limit from 2000 ppm to 1000 ppm. Reduction of maximum ground level sulfur oxide concentration to 0.04 ppm for 24 hours to comply with California State air quality standard.

RULE 57 - Restriction on maximum TRS concentration from any emission point not to exceed 50 ppm.

The Control Board then heard testimony from interested citizens groups and industry representatives. The citizens groups argued for stricter pulp mill odor controls. Dr. Roger Weiss of Humboldt State College presented a statistical summary of selected pulp mill emission reports and requested that the emission limits for both pulp mills be reduced by approximately 30 percent per year over a three year period to arrive at a limitation of 380 pounds per day of TRS emissions by 1973. He also pressed for an expanded ambient air sampling program to better determine future control requirements. Other citizens complained of lack of regulation enforcement when the pulp mills were experiencing equipment malfunctions or plant upsets.

Pulp industry representatives objected to the proposed revisions and stressed that local pulp mills were operating under the strictest regulations in the entire U.S. and were continuing their leadership in applying new control technology as it becomes available. The recent installation of continuous TRS monitors has permitted a great reduction in the frequency and duration of plant upsets.

Lumber industry representatives objected to the restrictions on combustion operations by the proposed limitation of 0.1 grain per cubic foot and stated doubt that such low limits could ever be achieved.

The Air Pollution Control Board will review all testimony from the hearing before taking final action on any of the proposed revisions.

Summary of Air Quality Studies

Pollutant	Month	Maximum	Average
Dust Fall (tons per square mile per month)	Mar., 1970 April, 1970 May, 1970	*57.5 @ Samoa *82.6 @ Samoa 12.4 @ Eur-SDH *Mostly sand	16.9 18.6 8.8
Suspended Particulate Matter (micrograms per cubic meter)	March April May	111 @ Arcata 131 @ Samoa 148 @ Samoa	64 60 71
Total Sulfation (mg of SO_3 per sq. decimeter per day)	March April May	0.05 @ Samoa 0.15 @ Ft. Humboldt 0.18 @ Ft. Humboldt	0.04 0.04 0.08
Total Oxidant (ppm)	April May June	0.022 @ Eureka 0.009 @ Eureka 0.010 @ Eureka	0.011 0.004 0.007
Nitrogen Dioxide (ppm)	April May June	0.007 @ Eureka 0.005 @ Blue Lake 0.007 @ Eureka	0.004 0.003 0.006
Aldehydes (ppm)	April May June	0.020 @ Eureka 0.015 @ Eureka 0.018 @ Eureka	0.008 0.009 0.012
Sulfur Oxides (ppm)	April May June	<0.001 @ Eur-SDH <0.001 @ Eur-SDH 0.001 @ Eur-SDH	<0.001 <0.001 <0.001
Hydrogen Sulfide (ppm)	April June	0.006 @ Eur-SDH 0.017 @ Eur-SDH	0.004 0.007
Total Mercaptans (ppm)	April May June	0.009 @ Eur-SDH 0.010 @ Eur-SDH 0.010 @ Eur-SDH	0.003 0.007 0.006
Carbon Monoxide (ppm)	April May	2 @ Eureka 10 @ Eureka	

Testing for Sulfur oxides, hydrogen sulfide, and total mercaptans done only at California State Division of Highways offices, Wabash and Union Streets, Eureka, California.

AIR POLLUTION VIOLATIONS CITED

Since the Rules and Regulations of the Humboldt County Air Pollution District became effective on January 1, 1970, a total of 13 violation notices have been issued for open burning and excessive smoke opacity. Such violation notices serve as an initial warning of an air pollution violation and require the violator to take corrective action to solve the air pollution problem. Recurrent or uncorrected violations will be referred to the District Attorney for misdemeanor action as outlined in the California Health and Safety Code.

Date	Company	Location	Source	Violation
1-2-70	McMurray & Sons	Eureka	Open burning	Rule 53-Open Fires
1-31-70	Simpson Timber Co.	Fairhaven	Power boiler	Rule 50-Visual Emissions
2-1-70	Simpson Timber Co.	Fairhaven	Power boiler	Rule 50-Visual Emissions
2-5-70	Eureka Forest Prod.	Eureka	Open burning	Rule 53-Open Fires
2-5-70	Rockin' R Meat Co.	Eureka	Open burning	Rule 53-Open Fires
4-7-70	Brightwood Lumber Co.	Arcata	Tepee burner	Rule 50-Visual Emissions
4-8-70	Brizard Const. Co.	Arcata	Open burning	Rule 53-Open Fires
4-9-70	G & R Metals	Eureka	Open burning	Rule 53-Open Fires
4-14-70	Eureka Tallow Co.	Eureka	Open burning	Rule 53-Open Fires
4-17-70	Pacific Oxygen Co.	Eureka	Open burning	Rule 53-Open Fires
6-8-70	Miller Motorcycle Co.	Eureka	Open burning	Rule 53-Open Fires
6-16-70	Coast Oyster Co.	Eureka	Open burning	Rule 53-Open Fires
6-23-70	Eureka Forest Prod.	Eureka	Open burning	Rule 53-Open Fires

NEWS BRIEF

Crown Simpson Pulp Company is constructing a new 150 ton per day sawdust digester to further increase its program of wood waste utilization. Removal of sawdust from local tepee burners should greatly improve their operation and reduce smoke density and particulate matter caused by inefficient burners in the Eureka, Arcata and Blue Lake area. Startup of the new digester is scheduled for September 15, 1970.

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Quarterly News Bulletin of the Humboldt County Air Pollution Control District

Vol. 2, No. 3 Third Quarter - 1970
5630 South Broadway, Eureka, California 95501 (707-443-3091)

NEW CONTROLS ADOPTED

After a lengthy exchange of testimony between interested citizen groups and industry officials at several public hearings, the Humboldt County Board of Supervisors has adopted the following revisions to the Rules and Regulations of the Humboldt County Air Pollution Control District:

RULE 52 - PARTICULATE MATTER

An emission limit of 0.2 grain per cubic foot for new combustion operations installed after January 1, 1971. Adjusted to 12 percent carbon dioxide.

RULE 56 - SULFUR OXIDE EMISSIONS

Reduction of the sulfur oxide emission limit to 1000 ppm. Reduction of maximum ground level sulfur oxide concentration to 0.04 ppm for 24 hours.

RULE 57 - SULFIDE EMISSION STANDARD

Effective January 1, 1972, TRS concentration from any emission point not to exceed 60 ppm and total TRS emissions from all mill sources not to exceed 0.8 pounds per ton of wood charged to mill.

N O T I C E

Our bulletin mailing list is being revised. If you wish to continue to receive this quarterly publication of the Humboldt County Air Pollution Control District, please tear off the lower portion of this sheet and return the mailing label to:

Humboldt County Air Pollution Control District
5630 South Broadway
Eureka, California

OUT OF THE FOG

For more than 600 years, Londoners alternately cursed and boasted about their famous fogs. In 1852 Charles Dickens wrote of leaden skies filled with black soot that resembled snow-flakes "gone into mourning for the death of the sun." Some 60 years later, T. S. Eliot immortalized the ". . .yellow fog that rubs its back upon the window-panes." Fog shrouded the malevolent doings of London villains from Jack the Ripper to Mr. Hyde and was all too familiar to Sherlock Holmes, who frequently set forth from Baker Street picking his way through a real "peasouper."

Yet today, to the dismay of moviemakers and the delight of countless Britons, London fog has virtually vanished. Only three or four times a year does anything that can credibly be described as fog descend on the city. Even then, it is never the suffocating, smoke-laden, brown or yellow stuff that once mantled the city with dreary regularity -- and sometimes lethal results. This year London skies were clear even during November, usually the foggiest month.

In 1956, a Clean Air Act aimed at industrial and domestic air polluters was pushed through Parliament. Traditional burning of soft coal in hearth grates was prohibited in large areas across Briton. British Industry spent nearly a billion dollars in the past decade to clean up the emissions from its smoke-stacks. The 156,000 tons of sooty grime which once belched into the air annually has been cut by 80% and about three-quarters of the city is actually smokeless.

(The above is taken from Time Magazine dated December 12, 1969)

MENDOCINO FORMS DISTRICT

The Mendocino County Board of Supervisors have formed an air pollution control district in an action directed at further expanding air pollution control in the California north coast counties. Dr. Robert Holtzer, County Health Officer will serve as Air Pollution Control Officer of the newly activated district. The entire north coast area, with the exception of Del Norte County, is now committed to programs of air improvement.

FEDS CITE HCAPCD

The pioneering program of kraft pulp mill odor control in Humboldt County is discussed in a new publication by the Department of Health, Education and Welfare entitled "Control of Atmospheric Emissions in the Wood Pulping Industry." This publication compares the local regulations with those in Oregon and Washington and points out the lack of similar regulations in other parts of the country. Pulp mill control methods and current technology is also discussed in great detail.

TEPEE TOPICS

The Arcata Redwood Company (Orick) and Georgia Pacific Corporation (Carlotta) have both made extensive modifications to their tepee burners and are successfully burning redwood wastes at the above locations. Both burners use recirculated overfire air and top dampers to retain heat for maximum combustion efficiency. Arcata Redwood uses the Medford Blowpipe system while Georgia Pacific's modifications were made by the Nor-Cal Sheet Metal Company using the Stutz grate system. These two improved redwood burners join the new Lausmann burner installed by Boise Cascade in Fort Bragg in proving that redwood wastes can be successfully burned in a properly designed burner.

The Fortuna Veneer Company has recently started up a new gas fired refractory lined sander dust burner at their Fortuna Plant. This is the first such unit installed in Humboldt County and should markedly reduce the fallout problems previously experienced in the vicinity of this plant.

AIR POLLUTION VIOLATIONS

Nine violation notices were issued during the past three months for open burning and excessive smoke emissions from tepee burners. Four of the nine citations were for the burning of wire insulation which always causes excessive smoke problems. One case of repeated wire burning was referred to the District Attorney's office for their disposition.

Date		Location	Source	Violation
7- 8-70	All Brite Lumber Co.	Arcata	Tepee burner	Rule 50-Visual Emissions
7-13-70	Britt Lumber Co.	Eureka	Tepee burner	Rule 50-Visual Emissions
7-30-70	C. L. Chaney	Arcata	Open burning	Rule 53-Open Fires
8- 6-70	Ervin Bittendorf	Arcata	Open burning	Rule 53-Open Fires
8-19-70	Del Norte Box Co.	Arcata	Tepee burner	Rule 50-Visual Emissions
8-25-70	NWPRR	Eureka	Open burning	Rule 50-Visual Emissions
8-28-70	Larry Zimmer	Rio Dell	Open burning	Rule 50-Visual Emissions
9-11-70	Hilfiker Pipe Co.	Eureka	Open burning	Rule 50-Visual Emissions
9-22-70	B&J Auto	Eureka	Open burning	Rule 50-Visual Emissions

COMPLAINT SCOREBOARD

Pulp mill odor complaints in September rose to the highest levels recorded this year with the arrival of our pleasant fall weather. The three day period September 17-19 was exceptionally bad with 47 odor complaints being registered. Since we are expanding our air sampling program in the odor affected areas, persons are requested to call our office at 443-3091 whenever the odor becomes objectionable.

	July	August	September
Smoke	31	16	49
Fallout	4	4	5
Pulp Mill Odor	72	75	127
Other Odor	6	4	1

PERSONNEL CHANGES

September 11, 1970 marked the departure of Mel Edlund, our first Air Pollution Chemist. Mel had been with the department since March, 1969 and was instrumental in setting up our new laboratory and developing our air monitoring program.

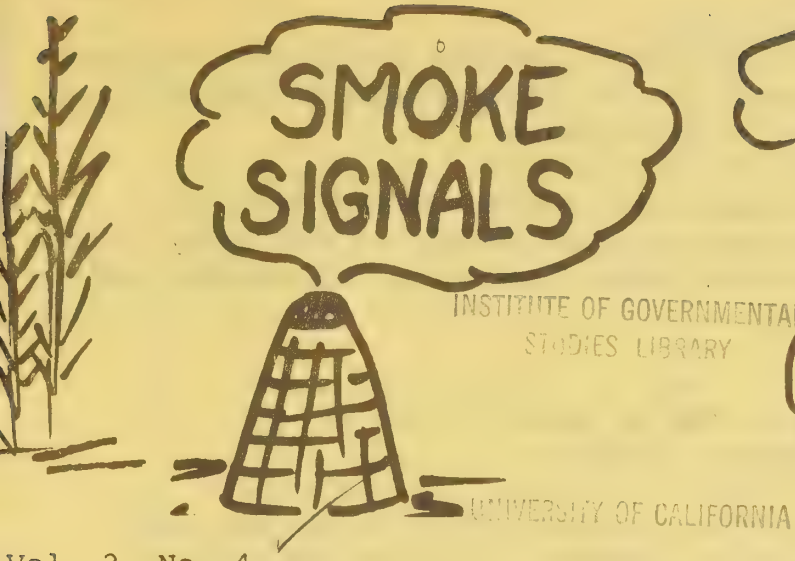
Jean Rigden has recently joined the department to fill our recurrent secretarial vacancy. Mrs. Rigden has lived in the Eureka area since 1961 and is well acquainted with the local community.

Summary of Air Quality Studies

Pollutant	Month	Maximum	Average-All Stations
Dust Fall (tons per square mile per month)	June	8.2 @ Samoa	6.3
	July	10.5 @ Eur-SDH	6.6
	August	13.2 @ Eur-SDH	7.4
Suspended Particulate Matter (micrograms per cubic meter)	June	129 @ Hoopa	53
	July	144 @ Blue Lake	58
	August	167 @ Samoa	71
Total Sulfation (mg of SO_3 per sq. decimeter per day)	June	0.10 @ Ft. Humboldt	0.05
	July	0.17 @ Ft. Humboldt	0.08
Total Oxidant (ppm)	July	0.004 @ Eureka	0.002
	September	0.024 @ Eureka	0.016
Nitrogen Dioxide (ppm)	July	0.007 @ Eureka	0.006
	September	0.007 @ Eureka	0.005
Aldehydes (ppm)	July	0.207 @ Eureka	0.064
	August	0.045 @ Eureka	0.027
Total Reduced Sulfur (ppm)	July	0.023 @ Eur-Gen. Hosp.	0.005
	August	0.012 @ Eur-SDH	0.004
	September	0.010 @ Eur-SDH	0.004
Hydrogen Sulfide (ppm)	July	0.010 @ Eur-SDH	0.005
	August	0.005 @ Eur-SDH	0.002
Total Mercaptans (ppm)	July	0.013 @ Eur-SDH	0.007
	August	0.006 @ Eur-SDH	0.002
Carbon Monoxide (ppm)	August	3.0 @ Eureka	
	September	3.0 @ Arcata	

Testing for hydrogen sulfide, and total mercaptans done only at California State Division of Highways offices, Wabash and Union Streets, Eureka, California.

A1705



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Humboldt County
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5630 South Broadway, Eureka, California 95501 (707-443-3091)

1971 - THE YEAR OF THE CYCLONE

This past year has been marked by many major air pollution control achievements here in Humboldt County. Among the most notable and costly we must include:

Georgia Pacific's new system for shredding and burning redwood bark in their power boilers.

City Garbage Company's installation of a smokeless incinerator for disposal of municipal refuse.

Simpson Timber Company's new improved tepee burner designed for smoke-free disposal of redwood bark.

Major reductions in pulp mill odor by both Georgia Pacific and Crown Simpson since the new control regulations went into effect.

This list could go on and on counting the numerous lumber companies and businesses that have eliminated a varied assortment of air pollution problems. The Humboldt County Air Pollution District wishes to thank all those persons who helped make 1970 the year that air pollution control finally got started here on the north coast. Many of the problems are not yet solved but most of them have been isolated, defined and corrective programs are in progress.

As the smoke starts to clear, the problems of excessive cyclone emissions have become more prominent. Cyclone separators handling sawdust, shavings and sander dust have been largely neglected and poorly designed in the past, yet one need only look at the roofs of nearby buildings to be convinced that substantial quantities of fine airborne materials are released by the average cyclone separator and those persons living close to such a source of fine sawdust can certainly attest to the realness of the problem. Already the Humboldt County Air Pollution Control District has received a petition containing 161 signatures of persons complaining about sawdust from a planing mill cyclone and numerous isolated complaints have been traced to an inefficient cyclone as the likely culprit.

Pneumatic conveying systems and their associated cyclone separators require operating permits issued by the Humboldt County Air Pollution Control District just as any other potential source of airborne contaminants.

The number and complexity of such systems seems almost unlimited, but starting in 1971 we will start a program of testing and inspecting the more prominent cyclone sources. Check your plant operation and see if excessive dust is being released at the cyclones.

* * * * * * * * * * * *

NEW STATE LAWS AFFECT BURNING

The 1970 State Legislature has passed and had signed into law 34 new bills dealing with air pollution. Among the most important bills which will directly affect the Humboldt County Air Pollution Control District are the following:

AB-16 requires the development of implementation plans by each air pollution control district for the regulation of agricultural burning. The law also prohibits, after December 31, 1971, any burning of solid or liquid waste in an open dump and bans the use of open fires for disposal of combustible or flammable wastes such as petroleum wastes, tires, trees, tar, metal salvage, etc. Extensions may be granted for a limited time in rural areas.

AB-83 activates air pollution control districts in all California counties and requires mandatory enforcement of state standards. Air pollution control districts were previously a local option of the County Board of Supervisors. This law also requires the formation of a basinwide air pollution control coordinating council by July 1, 1971. Such councils shall consist of one elected official from each air pollution control district within the air basin and the council must formulate and present to the Air Resources Board a basinwide control plan prior to January 1, 1972.

* * * * * * * * * * * *

Personnel Changes

Jack Caufield has joined the HCAPCD as our new Air Pollution Chemist. Jack, his wife, Diane and their two children are new to the Eureka area having just moved here from Manteca, California. Jack is a graduate Chemist from the University of the Pacific and has 9 years of industrial chemical experience. He will take over our air monitoring program and pulp mill odor studies.

TEPEE TOPICS

Oregon Shuts Down Wigwams

Whether you call them wigwams or tepee burners, they are the same sawmill waste burners that we are all familiar with here in Humboldt County. Effective December 31, 1970, all such burners in Oregon were notified to cease operating or make major improvements in the burners. Included in the required burner modifications the State of Oregon has listed:

1. Make burner shell airtight.
2. Install improved style forced underfire air system.
3. Install new recirculating overfire air system.
4. Provide a top damper in order to be able to adjust top opening.
5. Install auxiliary gas or oil burners to assist in startup or during periods of decreased wood burning rates.
6. Provide an automatic temperature controlling system to maintain burner exit gas temperature between 800-1200 degrees F.

Simpson Quits Smoking

The Simpson Timber Company is now operating a new smokeless tepee burner at its Korbel plant. The burner was designed by Marvin Leman from Simpson's Shelton Engineering offices and incorporates many advanced features so that it will be able to incinerate waste redwood bark without creating an air pollution problem. Although only 55 feet in diameter, this new burner consumes all the redwood bark from Simpson's large Korbel sawmill and has plenty of room to spare.

New California Laws Affect Burners

As part of a further statewide crackdown on local air pollution control districts, effective September 1, 1971, all variances must be reported to the California Air Resources Board for their review of local enforcement policies. Included with the listing submitted by Humboldt County will be all burners still operating on the restricted one day per week burning variance and all burner operators that have not completed their corrective programs. Eighteen tepee burners in Humboldt County are still not operating in compliance with Section 24242 of the California Health and Safety Code. They are the following:

Bonnie Lumber Sales Co. - Glendale
Cal-Pacific - Orick
Southern Humboldt Lumber Co.- Carlotta
Fortuna Veneer Co. - Fortuna Core Mill
Fortuna Wood Products - Fortuna
Halvorsen Industries - Korbel
Hollan-Del Forest Prod. - Arcata
Humboldt Fir Co. - Hoopa
Mc Intosh Lumber Co. -(bark)-Blue Lake
Georgia Pacific Corp. - Alderpoint
Georgia Pacific Corp. - Big Lagoon
Georgia Pacific Corp. - Carlotta Plang.
Georgia Pacific Corp. - Eureka
Georgia Pacific Corp. - Samoa
McNord Lumber Co., - Glendale
Overly Manufacturing - Arcata
The Pacific Lumber Co.(bark) - Scotia
Precision Lumber Co. - Bayside

The California Air Resources Board has already intervened to take corrective action in San Benito and El Dorado Counties. The actions in El Dorado County were in response to continued complaints against the Michigan - California Lumber Company.

Permit Summary

During the past year 115 operating permits were issued for equipment meeting the requirements of the Rules and Regulations of the Humboldt County Air Pollution Control District in the following categories:

Veneer Driers	21
Tepee Burners	28
Incinerators (commercial)	64
Pulp Mill Systems	2
Total Operating Permits	115

An additional 36 temporary permits were issued for special open burning situations, mostly involving land clearing or building demolitions. Fourteen emergency standby burner permits as authorized by Hearing Board Variance No. 13 were also issued to lumber companies which had greatly reduced their wood waste burning.

Incinerator inspections have been completed for schools, hospitals, nursing homes, veterinarians and kennels. We will soon be processing trailer courts, markets, furniture stores, restaurants, and other retail operations. New air pollution regulations which were effective January 1, 1971 greatly restrict future incinerator installations for commercial and industrial users. The old fashioned burn barrel is now limited to residential use only.

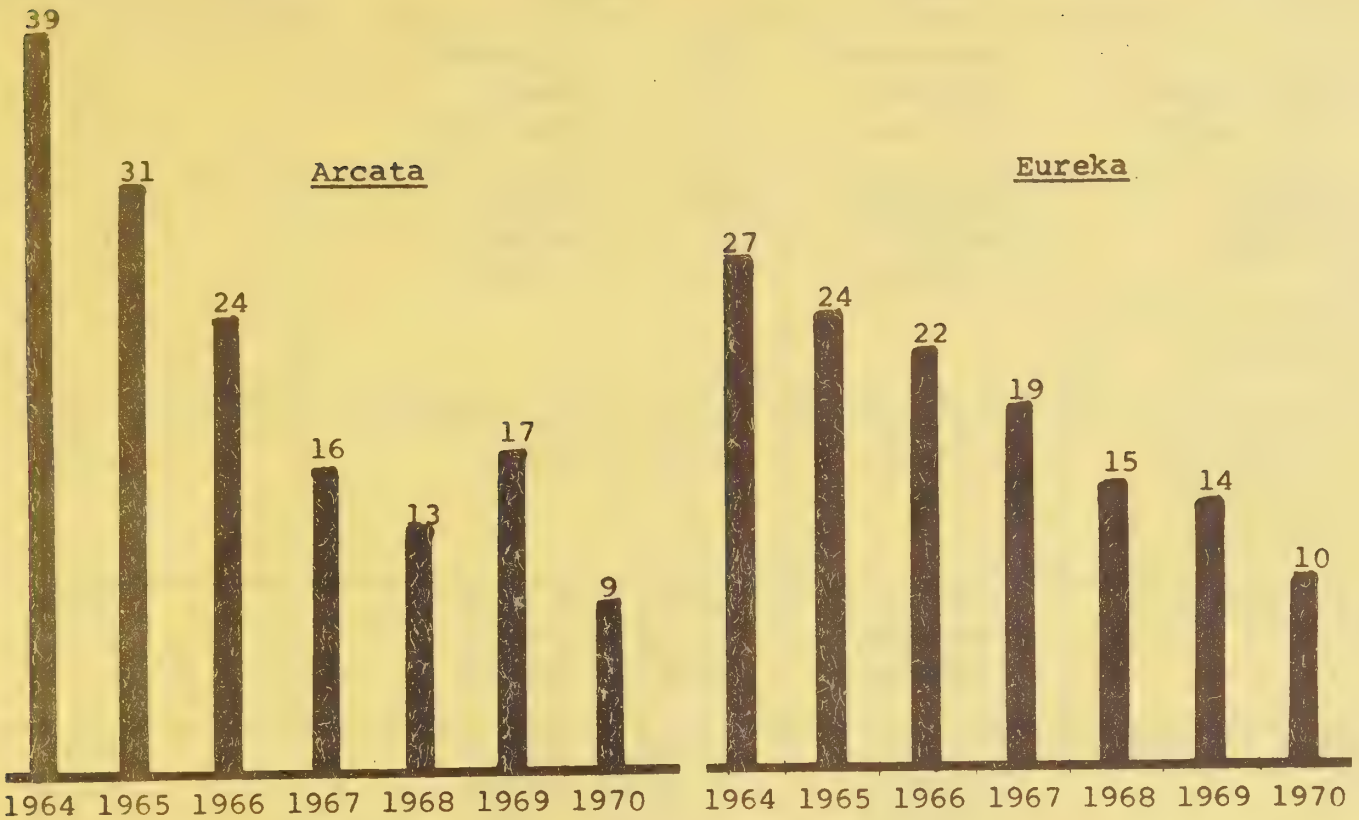
ERRATA

Several computational errors were discovered in the 1969 Summary of Air Pollutant Emissions in Humboldt County which was published in our Second Quarter Bulletin. The automobile hydrocarbon emissions should be reduced by approximately a factor of two and the new summary should read as follows:

TABLE I
SUMMARY OF AIR POLLUTANT EMISSIONS IN HUMBOLDT COUNTY, 1969

	STATIONARY SOURCES		TRANSPORTATION		TOTAL
Air Pollutant	Tons/Day	Percent	Tons/Day	Percent	Tons/Day
Particulate Matter	34.7	95.9	1.5	4.1	36.2
Carbon Monoxide	157.6	47.2	176.9	52.8	334.5
Hydrocarbons	29.7	47.2	33.3	52.8	63.0
Oxides of Nitrogen	8.7	42.2	11.9	57.8	20.6
Sulfur Oxides	6.1	85.9	1.0	14.1	7.1
Total - All Pollutants	236.8	51.3	224.6	48.7	461.4

ANNUAL AVE...E MONTHLY DUSTFALL
(Tons per square mile per month)



(Data for 1964-1968 supplied by NCASI)

The simplest of all air pollution tests is the dustfall analysis in which a standard size container is used to collect settleable particulate matter. This test collects dirt, soot, fly ash, sawdust and other large airborne particles and the results are reported in terms of tons per square mile per month. As shown on the charts above, dustfall has decreased greatly in the Eureka and Arcata areas since tests were first started in 1964. Most of this reduction is attributed to decreased wood waste incineration since the coming of the pulp mills and the elimination of industrial open burning.

Air Pollution Violations

Date		Location	Source	Violation
10-21-70	Foster Drayage	Eureka	Open burning	Rule 53 - Open Fires
10-30-70	Western Chain Saw Co.	Eureka	Open burning	Rule 53 - Open Fires
11-12-70	Humboldt Fir Co.	Hoopa	Tepee burner	Rule 50 - Visual Emissions
12-10-70	Nor Cal Sheet Metal	Eureka	Open burning	Rule 53 - Open Fires
12-17-70	Fortuna Wood Products	Fortuna	Open burning	Rule 53 - Open Fires
12-18-70	Al Amarant	Bayside	Open burning	Rule 53 - Open Fires

SUMMARY OF AIR QUALITY STUDIES

Pollutant	Month	Maximum	Average-All Stations
Dust Fall (tons per square mile per month)	September	11.9 @ Eur-SDH	9.2
	October	12.0 @ Samoa	7.4
	November	14.5 @ Eur-SDH	10.6
Suspended Particulate Matter (micrograms per cubic meter)	September	243 @ Samoa	83
	October	214 @ Eureka	91
	November	151 @ Samoa	55
Total Sulfation (mg of SO_3 per sq. decimeter per day)	Aug-Sept.	0.10 @ Ft. Humboldt	0.04
	Oct-Nov.	0.08 @ Samoa	0.04
Total Oxidant (ppm)	October	0.011 @ Eureka	0.006
	November	0.007 @ Eureka	0.004
	December	0.001 @ Eureka	0.001
Nitrogen Dioxide (ppm)	October	0.021 @ Eureka	0.015
	November	0.017 @ Eureka	0.009
	December	0.011 @ Eureka	0.009
Total Reduced Sulfur (ppm)	October	0.004 @ Eur-SDH	0.001
Carbon Monoxide (ppm)	October	3.0 @ Eureka	

COMPLAINT SCOREBOARD

The Humboldt County Air Pollution Control District wishes to extend a Happy New Year's Greeting to all the loyal odor and smoke reporters who have continued to assist us in tracking down local air pollution problems. By your continued alertness and the cooperation of both pulp mills we have recently confirmed our suspicions concerning two mill odor sources that had previously been thought to be only minor odor contributors. Both mills are installing new control systems to eliminate these problem sources.

	October	November	December
Smoke	39	37	23
Fallout	5	1	2
Pulp Mill Odor	103	35	17
Other Odor	5	2	2

HUMBOLDT COUNTY
AIR POLLUTION CONTROL DISTRICT
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